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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/623,049	10/12/2000	Norihisa Miyoshi	2000_1162A	5687

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EXAMINER	
DUONG, THANH P	

ART UNIT	PAPER NUMBER
1764	

DATE MAILED: 08/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/623,049	MIYOSHI ET AL.	
	Examiner	Art Unit	
	Tom P. Duong	1764	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *08 June 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-6 and 18-23* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-16 and 18-23* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Applicants' remarks and amendments filed on June 8, 2006 have been carefully considered. Claims 1 and 18 have been amended. Claims 1-16 and 18-23 are pending in this application.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

1. Claims 1-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohshita '740 in view of British Patent (1,166,675). Regarding claims 1-3, 5-7, 10-11, and 16, Ohshita discloses a fluidized-bed gasification furnace (Figure 1) utilizing a fluidized-bed reactor, said fluidized-bed gasification furnace comprising: a fluidized bed portion (fluidized zones A and B) for a fluidized medium, said fluidized bed portion having a fluidized bed floor portion (top surface of diffuser 52) at a bottom part thereof; a fluidizing gas dispersion device (diffuser plate 52) for blowing a fluidizing gas into said fluidized bed portion to fluidize the fluidized medium in said fluidized bed portion; a discharge port (openings between baffle 50 and diffuser 52) provided in the vicinity of said fluidized bed floor portion for discharging the fluidized medium; a fluidized medium discharge chute (69) having a medium-receiving end and a medium-discharge end, said

medium-receiving end being connected to said discharge port and said fluidized medium discharge chute extending downwardly from said medium-receiving end connected to said discharge port to said medium-discharge end disposed below said discharge port; a device (screw conveyor 70) for mechanically withdrawing the fluidized medium is provided in the vicinity of the lowermost part of said fluidized medium discharge chute; wherein said gas blow device is provided at the lowermost part of said fluidized medium discharge chute; wherein the fluidized bed reactor is divided into units (fluidized bed portion, diffuser, screw conveyor); wherein an outer wall (reactor wall 51) of said fluidized-bed gasification furnace is in a form of a rectangle. Ohshita '740 fails to disclose a gas blow device provided below said fluidized medium discharge chute for blowing a gas into said medium-discharge end of said fluidized medium discharge chute toward said medium-receiving end of said fluidized medium discharge chute. British Patent '675 teaches the benefits of providing a gas blowing device (18) below the medium discharge chute (5) to aerate the fluidized medium and to facilitate the removal of the fluidized medium (Figure 1). Thus, it would have been obvious in view of British Patent '675 to one having ordinary skill in the art to modify the fluidized bed reactor of Ohshita '740 with a gas blowing device as taught by British Patent '675 in order to gain the above benefits. Regarding claims 4 and 8-9, the recitation of "said gas blow device uses steam, carbon dioxide, or oxygen-free gas as a gas to be blown" is directed to the contents thereof during an intended operation and does not impart further structural limitation to the claimed invention. See *Ex Parte Thibault*, 164 USPQ 666, 667, (Bd. App. 1969). Regarding claims 6 and 12-15, the recitation of "so that said fluidized-bed

reactor can easily deal with fuels having different properties by changing the combination of each units" has been interpreted as intended use and does not impart further structural limitation to the claimed invention (See MPEP 2114).

2. Claims 18-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohshita '740 in view of British Patent (1,166,675) and Vidt (4,790,251). Regarding claims 18, 20, and 22-23, Ohshita '740 discloses a fluidized-bed gasification furnace (Figure 1) utilizing a fluidized-bed reactor, said fluidized-bed gasification furnace comprising: a fluidized bed portion (fluidized zones A and B) for a fluidized medium, said fluidized bed portion having a fluidized bed floor portion (top surface of diffuser 52) at a bottom part thereof; a discharge port (openings between baffle 50 and diffuser 52) provided in the vicinity of said fluidized bed floor portion for discharging the fluidized medium; a fluidized medium discharge chute (69) connected to said discharge port and extending downwardly from said discharge port to below said discharge port; a fluidized medium withdrawing device (screw conveyor 70) for mechanically withdrawing the fluidized medium, said fluidized medium withdrawing device being provided in the vicinity of the lowermost part of said fluidized medium discharge chute. Ohshita '740 fails to disclose a gas blow device provided below said fluidized medium discharge chute for blowing a gas into said medium-discharge end of said fluidized medium discharge chute toward said medium-receiving end of said fluidized medium discharge chute. British Patent '675 teaches the benefits of providing a gas blowing device (18) below the medium discharge chute (5) to aerate the fluidized medium and to facilitate

the removal of the fluidized medium (Figure 1). Thus, it would have been obvious in view of British Patent '675 to one having ordinary skill in the art to modify the fluidized bed reactor of Ohshita '740 with a gas blowing device as taught by British Patent '675 in order to gain the above benefits. Ohshita '740 discloses the claimed invention but also fails to disclose a gas blowing device is located below said fluidized medium withdrawing device. Vidt '251 teaches a gas blowing device (a purge gas source 65) is connected to the jacketed screw conveyor 11 (Col. 5, lines 34-40) and the purge gas reduces the stickiness of the ash particles and also prevent condensation of the sulfurous and sulfuric acid that sulfur dioxide and sulfur trioxide produce. Thus, it would have been obvious in view of Vidt '251 to one having ordinary skill in the art to modify the apparatus of Ohshita '740 with a gas blowing device as taught by Vidt '251 in order to reduces the stickiness of the ash particles and formation of sulfur dioxide and sulfur trioxide, which can increase corrosion in the inner wall of the reactor. Regarding claim 19, the recitation of "said gas blow device uses steam, carbon dioxide, or oxygen-free gas as a gas to be blown" is directed to the contents thereof during an intended operation and does not impart further structural limitation to the claimed invention. See *Ex Parte Thibault*, 164 USPQ 666, 667, (Bd. App. 1969). Regarding claim 21, the recitation of "so that said fluidized-bed reactor can easily deal with fuels having different properties by changing the combination of each units" has been interpreted as intended use and does not impart further structural limitation to the claimed invention (See MPEP 2114).

Response to Arguments

Applicant's arguments with respect to claims 1-16 and 18-23 have been considered but are moot in view of the new ground(s) of rejection. The amended claims 1 and 18 introduce new limitations which necessitate new ground of rejections.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tom P. Duong whose telephone number is (571) 272-2794. The examiner can normally be reached on 8:00AM - 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on (571) 272-1444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Tom Duong
August 15, 2006
TD

Glenn Caldarola
Supervisory Patent Examiner
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